DRAFT

DUBAI DECLARATION ON OER

DIGITAL PUBLIC GOODS AND EMERGING TECHNOLOGIES FOR

EQUITABLE AND INCLUSIVE ACCESS TO KNOWLEDGE

INTRODUCTION

UNESCO Member States adopted the 2019 Recommendation on Open Educational Resources (OER) at the 40th session of the UNESCO General Conference. The 2019 Recommendation on OER calls on Governments to support the creation and sharing of learning and teaching content through open licenses that respect the intellectual property rights of the copyright owner and provide permissions granting the public the legal rights to access, re-use, re-purpose, adapt, and redistribute this content.

The use of emerging technologies and Artificial Intelligence (AI) tools by the public is increasing at a rapid speed. To ensure AI systems are transparent and can be replicated and critiqued, the public requires AI infrastructure based on open source software and openly licensed content. The advancement of generative AI has fostered significant debates about the new ways in which content and data can be scraped, created, used, reused, and shared.

In the legal field, there have been intensive discussions on the status of creative works generated through AI techniques such as whether using all-rights-reserved copyrighted content to train AI models is fair use / fair dealing; the legality of using both copyrighted and open content to train AI models; if preference signals might empower creators to tell AI systems what they can and cannot do with their works; and the relevance of current open licenses in light of the challenges presented to content creators.

To examine mechanisms for optimizing openly licensed learning content to address the challenges and opportunities posed by emerging technologies and AI, UNESCO organized the 3rd UNESCO World Open Educational Resources (OER) Congress: 'Digital Public Goods: Open Solutions and AI for Inclusive Access to Knowledge'. This Congress was hosted by the Mohammed bin Rashid Knowledge Foundation (MBRF) and United Arab Emirates Authorities in Dubai, United Arab Emirates (U.A.E) from 19 to 20 November 2024.

The deliberations of this Congress aimed to identify how the implementation of this UN Normative instrument on OER, the UNESCO 2019 Recommendation on OER.[1] can contribute to the United Nations Secretary General's Road Map for Digital Cooperation[2], Commitment 7 of 'Our Common Agenda': to "Improve digital cooperation". In particular, the 3rd UNESCO World OER Congress aimed to contribute to the Global Digital Compact by putting forward targeted actions to promote the digital commons as a public good, drawing on the implementation of the UNESCO 2019 Recommendation on OER.

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[1] https://www.unesco.org/en/legal-affairs/recommendation-open-educational-resources-oer

[2] https://www.un.org/en/content/digital-cooperation-roadmap/assets/pdf/Roadmap_for_Digital_Cooperation_EN.pdf

The objectives of this 3rd UNESCO World OER Congress were to:

1) Share best practices and innovations in the implementation of the UNESCO 2019 Recommendation on OER in the five years since its adoption;
2) Identify strategies for supporting the implementation of the UNESCO 2019 Recommendation on OER to meet emerging challenges;
3) Identify collaborative mechanisms to mobilize more stakeholders to implement the UNESCO 2019 Recommendation on OER, and to expand access to quality, free, accessible, openly licensed learning resources in support of the Global Digital Compact and the Transforming Education Summit 2023 Call for Action.

The UNESCO 2019 Recommendation on OER addresses practitioners and decision makers in governmental and institutional settings and encourages knowledge sharing, capacity building, and policy support related to digital public goods for learning. It outlines recommendations to Member States in 5 areas of action: (i) building the capacity of stakeholders to create, access, re-use, adapt, and redistribute OER; (ii) developing supportive policy; (iii) encouraging inclusive and equitable quality OER; (iv) nurturing the creation of sustainability models for OER; and (v) facilitating international cooperation.

In preparation for the 3rd UNESCO World OER Congress, six Regional Consultations on OER were organized with the generous support of the Hewlett Foundation and the Mohammed bin Rashid Al Maktoum Knowledge Foundation (MBRF). These regional consultations were held online and in hybrid format, as follows: the Africa Consultation (hybrid, at eLearning Africa 2024, 31 May 2024); the Caribbean Consultation (online, 10 July 2024); the Asia and the Pacific Consultation (online, 30 July 2024); the Europe and North America Consultation (hybrid at Digital Learning Week, UNESCO on 4 September 2024); the Latin America Consultation (online, 8 October 2024); and the Arab States Consultation (online, 21 October 2024).

These consultations raised awareness of the objectives as well as discussion on regional needs related to the objectives of the 3rd UNESCO World OER Congress and identified best practices in the implementation of the UNESCO 2019 Recommendation on OER.

Furthermore, the 3rd UNESCO World OER Congress drew on the expertise and participation of the UNESCO/Internet Governance Forum (IGF) OER Dynamic Coalition. The UNESCO/IGF OER Dynamic Coalition fosters collaboration and knowledge sharing amongst stakeholders on the implementation of the UNESCO 2019 Recommendation on OER. The IGF Dynamic Coalition status allows for enriched multistakeholder deliberations on the implementation of the UNESCO 2019 Recommendation on OER within a wider intergovernmental framework: a global multi stakeholder platform established by the UN Secretary-General to facilitate the discussion of public policy issues pertaining to the Internet.

A key theme for the Congress is 'Digital Public Goods'[3] (DPGs), which are defined by the UN Secretary-General's Roadmap for Digital Cooperation, as "open-source software, open data, open AI models, open

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[3] Digital Public Goods: A digital public good is defined by the UN Secretary-General's Roadmap for Digital Cooperation, as: "open-source software, open data, open AI models, open standards and open content that adhere to privacy and other applicable laws and best practices, do no harm, and help attain the SDGs.

standards and open content that adhere to privacy and other applicable laws and best practices, do no harm, and help attain the sustainable digital goals (SDGs)". DPGs available with an open copyright license have become essential in a variety of areas including education, with OER. Open solutions[4] are aligned with the principles of DPGs. Due to their open licensing rules, they allow flexibility, scalability, and interoperability to promote knowledge sharing and access to OER, a digital public good that supports the enrichment of the global knowledge commons.

RECOMMENDATIONS

Emerging technologies, including AI, provide opportunities to advance the UNESCO 2019 OER Recommendation. Beyond the creation of new openly licensed content, potential applications include: facilitating the detection of existing openly licensed content online; developing techniques for effective OER curation; translating OER into multiple languages; and facilitating content indexing through the recommendation of descriptive metadata. Other emerging technologies, such as blockchain-based services and applications, could potentially ensure the provenance, integrity, and lawful use of OER.

Legal frameworks are then not up to date with technological advancements such as these. In the realm of intellectual property rights (IPR), the key to OER, this can lead to ambiguities on what constitutes legal use as well as issues regarding how exceptions and limitations to copyright law may be used even when a work is not openly licensed. Developing clear guidelines and policies that address these issues can help protect the rights of content creators, ensure proper attribution, and create innovative technology spaces for the public good.

The Global Digital Compact, and UNESCO's ROAM-X principles, which are Rights-based, Open, Accessible, and promote Multi-stakeholder Participation based on cross-cutting principles, and in particular Gender Equity, can inform policies for OER by providing a comprehensive framework that ensures inclusivity, equity, and collaboration in the development and implementation of Open Educational Resource.

These frameworks and principles, alongside the UNESCO 2019 Recommendation on OER, provide a robust foundation for developing OER. The stakeholders addressed in this document are those in the UNESCO 2019 Recommendation on OER[5] . With regard to Generative AI, it is important to underscore that these recommendations apply both to the inputs and outputs of LLMs. Furthermore, the principle of human centered use of technology prevails in all recommendations. The principles of transparency and knowledge sharing are fundamental for the implementation of these recommendations. The below guidelines aim to provide actions to harness the opportunities posed by emerging technologies, such as AI, for expanding knowledge sharing and creation through the implementation of the 2019 Recommendation on OER.

I.   Capacity Building

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[4] Open solutions are digital public goods that are created and shared on an open copyright license, that respect the intellectual property rights of the copyright owner and that allow users to undertake at least one or more of the following actions: re-use, re-purposing, adaptation and/or redistribution

[5] teachers, educators, learners, governmental bodies, parents, educational providers and institutions, education support personnel, teacher trainers, educational policy makers, cultural institutions (such as libraries, archives and museums) and their users, information and communications technology (ICT) infrastructure providers, researchers, research institutions, civil society organizations (including professional and student associations), publishers, the public and private sectors, intergovernmental organizations, copyright holders and authors, media and broadcasting groups and funding bodies

There is a need for 'fit for purpose' digital skills to foster responsible users, creators, and providers of content using emerging technologies such as Generative AI. Such skills will ensure better enforcement of the following principles of DPG. There is a need to ensure attention to digital rights by all actors to ensure measures to minimize the collection and treatment of user data, protect user privacy, as well as make OER that are accurate and do not contribute to misinformation, using AI tools or not. This involves developing trustworthy AI and ensuring openness and active transparency in all phases and aspects of AI development (including training data) prioritizing the privacy and security of learners and guaranteeing that educational data and metadata will not be monetized. Engaging educators, learners, and communities in the governance, development, and implementation of emerging technologies, including AI-enhanced OER systems, is crucial for this process. Additionally, providing professional development and support for educators and content creators on copyright issues (including exceptions and limitations) and open licensing will help them navigate the challenges posed by emerging technologies and ensure a culture of sharing and collaboration that respects copyright laws.

The suggested actions are to:

1. Support the continuous professional development of contributors, content developers, and content providers, on Generative AI projects, regarding the importance of adhering to and respecting open licensing terms of both input and output content. This would also include issues related to training on understanding how commercial AI services impact open content ecosystems, allowing them to critically engage with licensing; and reinforce skills to take an active role in developing specialized, responsible, community-driven large language models (LLMs) for OER.

2. Promote continuous, contextualized and inclusive digital literacy capacity building for OER stakeholders at all levels to allow stakeholders to assess, understand, review, and engage in the responsible development and use of AI and emerging technologies for OER.

3. Support the development of linked technologies to improve attribution and discoverability of OER. Prioritize data protection, interoperability, and the use of thesauri and controlled vocabularies to streamline metadata across platforms. Focus could be on building interoperable, open-source AI frameworks for OER that promote decentralized control and safeguard content integrity.

4. Support the development of guidance that promote the implementation and prioritization of digitally signed works for OER, and their re-use in the training of open AI models for openly licensed learning content.

5. Implement strategies grounded in human rights that are open, accessible, including those in vulnerable situations, multistakeholder, gender inclusive to ensure protection and respect for user generated data, metadata, privacy and attend to ethical practices and respect copyright rules.

II. Policy

Recognizing the importance of protecting authorship and intellectual property rights (IPR) is crucial for promoting sustainable licensing models that favour the development of supportive policy environments. These policy environments should focus on the protection and verifiability of authorship within OER and other Digital Public Goods. To support effective and responsible engagement in knowledge sharing and creation, it is essential to develop clear guidelines that demystify emerging technologies. In this framework it is important to ensure links between different aspects of Open Solutions, such as links between OER and open access, open science, open data, free and open source software open data. Enhancing the trustworthiness of open licensing schemes by ensuring that emerging technologies transparently record and

provide attribution of all contributions and modifications will promote sustainable and long-term solutions for future technological developments.

1. Advocate for Generative AI platforms to recognize and respect the licenses and authorship of openly licensed content. This would entail incorporating open licensing into the Terms of Use of AI applications, specifying that it is only to be used by humans to generate openly licensed content and implementing robust monitored to ensure compliance.

2. Advocate for the recognition of open licenses in AI model training, ensuring that both the input data and generated content reflect proper attribution to the original creators. This includes embedding licensing information in outputs and promoting the use of compatible open licenses to safeguard the provenance of openly licensed materials used in AI models.

3. Advocate for the adoption of machine-readable licenses in metadata to ensure proper attribution of both training data and generative AI outputs to clarify the use of OER as AI training data under existing licenses and how AI systems should attribute this usage

4. Encourage and support research into next-generation attribution systems to enable the tracing of the use and re-use of OER, open solutions and OER as digital public goods, integrating in research elements of Rights, Openness, Access to all, Multistakeholder participation, and Cross-cutting issues to develop transparent, accessible, and equitable systems for attributing, retrieving and reusing OER

III. Ensuring inclusive and equitable access to quality OER

Emerging technologies have the potential to enhance inclusive and equitable access to quality OER. For example, text-to-speech or AI-based translation services can support activities to make OER more accessible. Ensuring that OERs are accessible in low-bandwidth scenarios is essential to make these resources inclusive and equitable. Blockchain can support the principles of inclusivity and participation by enabling transparent and accessible sharing of OER globally. This can facilitate the creation, adaptation, and sharing of OER while respecting intellectual property rights.

1. Support the development of AI-enabled OER that is accessible in low-bandwidth scenarios and designed to enhance the accessibility of vulnerable groups, including those with disabilities by ensuring its correct integration and readability with assistive technologies, that ensures the highest standards of privacy and data protection during the production, use and sharing of OER.

2. Integrate machine-readable licenses as metadata that include digital identifiers for authorship for authenticating authorship into quality criteria for the production of OER and consider it as a criterion for inclusion in OER directories. Quality criteria and policies should emphasize the connection of authorship to real-world identity of authors - both to create incentives for publication and to counter misinformation efforts.

3. Support the translation and contextualization of OER into multiple languages, using AI-related technologies when appropriate, with due attention to the quality of the output of translations and its cultural relevance in collaboration with users' communities

4. Promote open ecosystems that prioritize the development of digital public goods and open solutions. This includes fostering robust public infrastructure and public-private partnerships, while also supporting novel private initiatives for OER using emerging technologies, including AI, that adhere to the principles of digital public goods and high-levels of openness.

IV. Sustainability Models for OER

Promoting sustainable environmental approaches in the development and deployment of digital public goods can minimize energy consumption and reduce the carbon footprint. Sustainability frameworks are vital for the long-term viability of OER. These frameworks should address interoperability, sustainable funding, protection of intellectual property rights, and sustainable practices through multi-stakeholder participation. By aligning with global accessibility standards and promoting responsible practices, stakeholders can collectively advance the development and deployment of OER in ways that are inclusive, sustainable, and ethically sound.

1. Support approaches to ensure Interoperability, Intellectual Property Rights (IPR) protection as well as sustainable scaffolding of OER development grounded in the ROAM-X principles of human rights, openness, accessibility, and multi-stakeholder participation and cross-cutting issues of gender.

2. Promote sustainable environmental approaches such as green computing in the development and deployment of digital public goods to minimize energy consumption and reduce the carbon footprint, recognizing when the use of AI tools are not necessary or appropriate.

3. Promote the practice of participatory governance, active transparency, public reporting and regular audits for the complete OER ecosystem (including technological, legal, and pedagogical aspects) to build trust among stakeholders.

4. Promote open ecosystems that prioritize the development of digital public goods and open solutions. This includes fostering robust public infrastructure and public-private partnerships, while also supporting novel private initiatives for OER using emerging technologies, including AI, that adhere to the principles of digital public goods and high-levels of openness.

V. International cooperation

Reinforced collaborative mechanisms at regional and international levels are crucial to ensure OER initiatives harness, when appropriate, emerging technologies including AI, in support of the 2030 UN Development Agenda including addressing issues such as gender bias.

1. Establish regional and international networks to support collaboration to empower community driven OER AI development. These networks should also support a human centered use of emerging technologies, including AI, for the implementation of the 2019 UNESCO Recommendation on OER.

2. Establish mechanisms to support engagement with the wider open community and legal experts on open licensing and intellectual property law to develop guidance and capacity training to ensure that emerging technologies, such as those integrating generative AI, adhere to evolving legal terms and address the demands and voices of diverse stakeholders.

3. Support cooperation including at inter-regional and inter-sectoral levels amongst Research and Development Centres to develop, and advance responsible AI frameworks as well as support the development of guidance and training for users on emerging technologies and novel methods to promote OER, in light of emerging technologies and AI.

4. Support collaborative frameworks so that OER repositories, and other sources of open content, develop and implement policies that prioritize the integration of authorship recognition models, and also clearly define how these works may be processed and used, including criteria for the training of AI models.

5. Facilitating the development of platforms using AI techniques where stakeholders can create and co-create OER adhering to the 2019 UNESCO Recommendation on OER.

Conclusion

The 3rd UNESCO World OER Congress reaffirms the transformative potential of OER as a cornerstone for equitable and inclusive access to knowledge in the digital age. By harnessing emerging technologies, including AI, and embracing open solutions aligned with the principles of Digital Public Goods (DPGs), the global community can foster innovation while addressing challenges related to access, intellectual property, and sustainability.

The commitments made through the Dubai Declaration aim to bolster global efforts to bridge the digital divide, empower diverse communities, and contribute to the advancement of the United Nations Sustainable Development Goals (SDGs). Through collaborative action, we can ensure that OER remains a catalyst for lifelong learning and an enabler of a fairer, more knowledge-driven future for all.